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Lester J. Chong

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THE DIRECTV GROUP INC
PATENT DOCKET ADMINISTRATION RE/R11/A109
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EXAMINER

MERED, HABTE

ART UNIT

PAPER NUMBER

2662

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/929,323

Applicant(s)

CHONG ET AL.

Examiner

Habte Mered

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. The amendment filed on 06 September 2005 has been entered and fully considered.
2. Claims 1-18 are currently pending/
3. Claims 1, 2, 4, 5, 7, 8, 11, and 12 are amended by the Applicant in the amendment filed on 06 September 2005.
4. Claims 13-18 are new claims added by the Applicant in the amendment filed on 06 September 2005.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Huotari et al (US Pub. No. 2002/0004935), hereinafter referred to as Huotari, in view of Wang et al (US 6, 636, 505), hereinafter referred to as Wang.

Huotari discloses a system that provides automated installation and configuration of DSL modems and associated user systems without a user having any knowledge of the operating or networking system. The system disclosed by Huotari just like the applicant's invention stops the need for sending a technician to the customer premises (i.e. truck roll), the need for logging in each time a connection is established as it

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assigns a static IP address to the DSL modem, and the need to use a domain name when establishing a PPP session. (See Paragraph 11)

7. Regarding **claims 1 and 12**, Huotari discloses a computer-implemented method and system for provisioning broadband service in a Point-to-Point Protocol over Ethernet (PPPoE) network, **(PPP is the common protocol for service provisioning circuit-switched telephone networks. It is also considered a good choice for the delivery of broadband services since it has built-in mechanisms for IP address assignment, layer-2 security, and a means for authentication/authorization/accounting. A PPPoE network is a PPP connection at an Ethernet-based host. The host is simply a PC with an Ethernet NIC and can provide access based on DSL modem that supports PPP between end users and ISPs/NSPs since ISPs/NSPs already have infrastructure to support dial-up access based on PPP. Huotari discloses an end user system shown in Figure 1 as element 105 and has a PC and a DSL modem establishing a PPPoE network. See Paragraphs 55 and 56) comprising: transmitting an authentication request including a user identifier from a modem to multiple domain names of an Internet Service Provider (ISP) over a PPPoE network; and receiving authorization for the modem from at least one but not all of the domain names of the ISP associated with the user identifier (See Paragraphs 68 and 69. Huotari discloses a method as shown in Figure 3 whereby an authentication request is initially sent to the Service Provider 110 via user data file 300. The user file data is shown in Figure 4 and contains domain name, login name and login password. Huotari discloses three different automatic**

installation methods of which the first two provide the same result as the applicant's invention. Namely, Figure 6 describes a dial-up installation process and Figure 7a pre-set installation process. (See Paragraph 106) In Figure 7, the end user using a CD provided by the service provider that contains configuration file can configure the DSL modem by going through the steps shown in Figure 7. Going iteratively through the steps in Figure 7, at step 615, if the local configuration file ATM encapsulation value is the same as that of PPPoE (i.e. RFC 2516 - see Paragraph 104) then it goes straight to step 622. At step 622, the pre-set installation program asks the user for ISP supplied PPP username and password and right after that sends the authorization request, which includes the username, password and the domain name of the ISP. In this case, the end user is completely shielded from knowledge of the ISP/domain name. (See Paragraph 108) There is really no need to send multiple domain names in most cases in provisioning broadband services for residential use as the end user normally subscribes to a single ISP.)

Huotari, however, fails to expressly disclose that multiple authorization requests to multiple domain names can be sent from a single modem.

Wang discloses a method of automatically provisioning a broadband communication service to a subscriber using a broadband or DSL modem.

Wang discloses that multiple authorization requests to multiple domain names can be sent from a single modem. (The broadband service is provided over a Point-to-Point over Ethernet (PPOE) network (See Figures 3, 4, 8 and 13). The DSL

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modem will receive the domain names of reachable service providers (See Column 9, Lines 58-67 and Column 10, Lines 44-49) in the form of a User Profile (and is stored in the modem as shown in Table 6). Wang shows that the DSL modem will let the user select a service provider and send an authentication request. The user can select more than one service providers (i.e. domain name) and fill out a username and password (as shown in Figures 6 and 14) and then can send the requests to the service providers. Wang discloses that the user can have concurrent connections to different ISPs. (See Column 10, Lines 10-24 and 56-60). There is no unique technical difficulty that the Applicant's disclosed invention overcomes in accessing different domains within an ISP as opposed to Wang's apparatus being able to access different domains associated with different ISPs. The different domains associated with the same ISP are similar to the domains associated with different ISPs and are accessed in a similar method.)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Huotari's method to incorporate a step in the DSL modem configuration and installation procedure to allow sending authentication requests to more than one domain names/ISPs, the motivation being simplification and complete automation of broadband modem installation for end users interested in accessing any number of ISPs they are registered with as stated in Wang Column 10, Lines 10-15.

8. Regarding **claim 2**, Huotari discloses all aspects of the claimed invention as set forth in the rejection of claim 1 but fails to teach a method, further comprising prior to the transmitting step, the step of providing a modem that includes a list of multiple domain

names for the ISP, where each of the domain names is associated with a different Broadband Service Node (BSN).

Wang discloses a method, further comprising prior to the transmitting step, the step of providing a modem that includes a list of multiple domain names for the ISP, where each of the domain names is associated with a different Broadband Service Node (BSN). (Wang provides a method whereby a list of reachable ISPs (i.e. multiple domain names) is provided to the modem and the user selects the appropriate ISPs or domain names. Wang provides a simplified graphical user interface where the end user can choose the domain names presented as the regular names of the ISPs and should be easy for the end user to pick the appropriate domain name. See Wang Column 9, Lines 58-67 and Wang Column 10, Lines 44-49. Each element 100 in Wang's Figures 1-4 is a unique broadband service node and represents different ISPs or domain names. See also Wang Column 9, Lines 24-30 and Wang Column 10, Lines 44-50. There is no unique technical difficulty that the Applicant's disclosed invention overcomes in accessing different domains within an ISP as opposed to Wang's apparatus being able to access different domains associated with different ISPs. The different domains associated with the same ISP are similar to the domains associated with different ISPs and are accessed in a similar method.)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Huotari's method to incorporate a step in the DSL modem configuration and installation procedure to allow sending authentication requests to

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more than one domain names/ISPs, the motivation being simplification and complete automation of broadband modem installation for end users interested in accessing any number of ISPs they are registered with as stated in Wang Column 10, Lines 10-15.

9 Regarding **claim 3**, Huotari disclose all aspects of the claimed invention as set forth in the rejection of claim 1 but fails to disclose a method further comprising prior to the transmitting step, the step of establishing a PPPoE session.

Wang discloses a method further comprising prior to the transmitting step, the step of establishing a PPPoE session. **(It is important to note that the applicant divides the PPPoE session into two components as indicated in the applicant's specification on the last paragraph of page 11: Discovery and PPP session. Wang shows in Figure 5 a detailed service provisioning flow. Prior to establishing the PPP session Wang shows a series of steps in Wang's Figure 5, before the PPP session is started and the authentication request is transmitted, which constitute a Discovery phase of the PPPoE session. Therefore, in Wang's method the PPPoE session is also established prior to transmitting the authentication requests. See also Column 9, Lines 58-67 and Column 10, Lines 1-25)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Huotari's method to incorporate a step of establishing a PPPoE session, the motivation being able to use it for delivery of broadband services since it has built-in mechanisms for IP address assignment, Layer-2 security and a means for authentication/authorization/accounting as detailed in RFC 2516 and is the ubiquitous standard in the industry.

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10. Regarding **claims 4, 13 and 16**, Huotari discloses all aspects of the claimed invention as set forth in the rejection of claims 1 and 12, including prior to the transmitting step, the modem requests only a single user identifier from a user of a client computer and receives and stores the user identifier in the modem. **(Huotari discloses that if the Dial-Up Installation Process shown in Huotari's Figure 6 is used then the user of the client computer has to supply a single identifier, which is the ISP provided username. If the Pre-Set Installation Process is used as shown in Figure 7 and the session is a PPPoE then at step 622 the user of the client computer has to supply a single identifier, which is an ISP provided PPP user name. See also Paragraphs 88, 107 and 108)**
11. Regarding **claim 5**, Huotari discloses all aspects of the claimed invention as set forth in the rejection of claims 1 and 4 including wherein the transmitting step comprises transmitting an authorization request containing the user identifier and a generic password to each of the multiple domain names. **(Huotari discloses a method of transmitting an authorization request containing a user name as the identifier and a password and sending it to a single domain name. See also Paragraphs 68, 69 and Figure 3. Wang discloses that an authorization request containing the user name and the password can be sent to multiple domain names or ISPs. See Column 9, Lines 58-67; Column 10, Lines 44-49; Column 10, Lines 10-24 and 56-60; Figures 6 and 14. However, the value of the password being transmitted can be unique for each user or generic. If generic value is used it makes the installation process easy but introduces a measure of insecurity and vulnerability**

for the ISP and end user. On the other hand unique passwords can make the installation process more cumbersome but provide a higher level of security.

Therefore, the determination of the value of the password is really a design and operations issue.)

12. Regarding **claim 6**, Huotari discloses all aspects of the claimed invention as set forth in the rejection of claim 1 including, wherein the receiving step comprises acquiring at least one static Internet Protocol (IP) address. **(Huotari discloses a method where the configuration file sent from the ISP contains an IP address for the CPE/DSL Modem and the IP address can either be static or dynamic. See Huotari's Paragraphs 73, 82 and Figure 5C)**

13. Regarding **claim 7**, Huotari discloses all aspects of the claimed invention as set forth in the rejection of claims 1 and 6 including transmitting a configuration request to the ISP, where the configuration request is addressed from a static IP address; receiving full configuration details from the ISP, where the full configuration details are addressed to the static IP address; and automatically configuring the modem based on the full configuration details. **(Huotari discloses that the static IP address is sent as part of the configuration file and as part of fully configuring the modem the static IP address is assigned to the DSL modem. There is no unique advantage in sending the static IP address prior to sending the configuration file.)**

14. Regarding **claim 8**, Huotari discloses a system for provisioning broadband service in a Point-to-Point Protocol Over Ethernet (PPPoE) network, comprising: at least one client computer; a modem coupled to the client computer **(See Figures 1 and 2),**

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the modem includes a memory comprising: instructions for transmitting an authentication request including a user identifier from the modem to multiple domain names of an Internet Service Provider (ISP) over a PPPoE network; **(PPP is the common protocol for service provisioning circuit-switched telephone networks. It is also considered a good choice for the delivery of broadband services since it has built-in mechanisms for IP address assignment, layer-2 security, and a means for authentication/authorization/accounting. A PPPoE network is a PPP connection at an Ethernet-based host. The host is simply a PC with an Ethernet NIC and can provide access based on DSL modem that supports PPP between end users and ISPs/NSPs since ISPs/NSPs already have infrastructure to support dial-up access based on PPP. Huotari discloses an end user system shown in Figure 1 as element 105 and has a PC and a DSL modem establishing a PPPoE network. See Paragraphs 55 and 56)** and instructions for receiving authorization for the modem from at least one but not all of the domain names of the ISP associated with the user identifier; **(See Paragraphs 68 and 69. Huotari discloses a method as shown in Figure 3 whereby an authentication request is initially sent to the Service Provider 110 via user data file 300. The user file data is shown in Figure 4 and contains domain name, login name and login password. Huotari discloses three different automatic installation methods of which the first two provide the same result as the applicant's invention. Namely, Figure 6 describes a dial-up installation process and Figure 7a pre-set installation process. (See Paragraph 106) In Figure 7, the end user using a CD provided by the service provider that**

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contains configuration file can configure the DSL modem by going through the steps shown in Figure 7. Going iteratively through the steps in Figure 7, at step 615, if the local configuration file ATM encapsulation value is the same as that of PPPoE (i.e. RFC 2516 - see Paragraph 104) then it goes straight to step 622. At step 622, the pre-set installation program asks the user for ISP supplied PPP username and password and right after that sends the authorization request, which includes the username, password and the domain name of the ISP. In this case, the end user is completely shielded from knowledge of the ISP/domain name. (See Paragraph 108).

Further Huotari discloses an authentication server is coupled to each of the ISPs where the authentication server transmits authorization for the modem for the domain names that are associated with the user identifier. **(See Paragraph 58)**

Huotari, however, fails to expressly disclose that multiple authorization requests to multiple domain names can be sent from a single modem. Further Huotari fails to disclose multiple Broadband Service Nodes (BSNs) can be coupled to the DSL modem, where each of the multiple domain names is associated with a different one of the multiple BSNs.

Wang discloses that multiple authorization requests to multiple domain names can be sent from a single modem. **(Wang discloses that broadband service is provided over a Point-to-Point over Ethernet (PPOE) network (See Figures 3, 4, 8 and 13). Wang also discloses that each of the multiple domain names is associated with a different one of the multiple BSNs. (Each element 100 in**

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Wang's Figures 1-4 is a unique broadband service node and represents different ISPs or domain names. See also Wang Column 9, Lines 24-30 and Wang Column 10, Lines 44-50.) The DSL modem will receive the domain names of reachable service providers (See Column 9, Lines 58-67 and Column 10, Lines 44-49) in the form of a User Profile (and is stored in the modem as shown in Table 6). Wang shows that the DSL modem will let the user select a service provider and send an authentication request. The user can select more than one service providers (i.e. domain name) and fill out a username and password (as shown in Figures 6 and 14) and then can send the requests to the service providers. Wang discloses that the user can have concurrent connections to different ISPs. (See Column 10, Lines 10-24 and 56-60.) Wang also discloses multiple Broadband Service Nodes (BSNs) can be coupled to the DSL modem, where each of the multiple domain names is associated with a different one of the multiple BSNs. (There is no unique technical difficulty that the Applicant's disclosed invention overcomes in accessing different domains within an ISP (i.e. BSNs) as opposed to Wang's apparatus being able to access different domains associated with different ISPs. The different domains associated with the same ISP are similar to the domains associated with different ISPs and are accessed in a similar method.)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Huotari's method to incorporate a step in the DSL modem configuration and installation procedure to allow sending authentication requests to more than one domain names/ISPs, the motivation being simplification and complete

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automation of broadband modem installation for end users interested in accessing any number of ISPs they are registered with as stated in Wang Column 10, Lines 10-15.

15. Regarding **claim 9**, Huotari discloses all aspects of the claimed invention as set forth in the rejection of claim 8 but fails to disclose a system further comprising: a Digital Subscriber Line Access Multiplexer (DSLAM) coupled between the modem and the BSNs; an Asynchronous Transfer Mode (ATM) network coupled between the DSLAM and the BSNs; and a Broadband Remote Access Server (BRAS) coupled between the ATM network and the BSNs.

Wang discloses a system further comprising: a Digital Subscriber Line Access Multiplexer (DSLAM) (**Wang's Figure 3, element 90**) coupled between the modem (**Wang's Figure 3, element 110**) and the BSNs (**Wang's Figure 3, elements 100; Each ISP can be considered as a BSN**); an Asynchronous Transfer Mode (ATM) network (**Wang's Figure 3, element 140**) coupled between the DSLAM and the BSNs; and a Broadband Remote Access Server (BRAS) (**Not shown in Figures 2 and 3 but is the Wide Area Concentrator mentioned in Wang's Column 9, Lines 24-30**) coupled between the ATM network and the BSNs. (**See also Figure 9**)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Huotari's system to incorporate end-to-end broadband ADSL architecture. The motivation being Huotari in Figure 1 shows an end-to-end broadband DSL architecture and mentions in Paragraph 37 the modem can be ADSL modem and Wang in Figure 3 shows the implementation of ADSL modem in an end-to-end broadband ADSL architecture.

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16. Regarding **claim 10**, Huotari discloses all aspects of the claimed invention as set forth in the rejection of claim 8 but fails to disclose a system wherein the BSNs are coupled to the Internet.

Wang discloses a system wherein the BSNs are coupled to the Internet. **(Each element 100 in Wang's Figures 1-4 is a unique broadband service node and represents different ISPs or domain names. See also Wang Column 9, Lines 24-30 and Wang Column 10, Lines 44-50. ISPs sole purpose is to connect users to the Internet and the BSNs have to be coupled to the Internet.)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Huotari's system to incorporate a system connecting the BSNs to the Internet. The motivation being that ISP as the name implies its main functionality is be the gateway to the Internet for subscribers.

17. Regarding **claims 11 and 15**, Huotari discloses all aspects of the claimed invention as set forth in the rejection of claims 10 and 12 respectively and including, a system wherein the receiving step comprises acquiring at least one static Internet Protocol (IP) address. **(Huotari discloses a method where the configuration file sent from the ISP contains an IP address for the CPE/DSL Modem and the IP address can either be static or dynamic. See Huotari's Paragraphs 73, 82 and Figure 5C)**

18. Regarding **claim 14**, Huotari discloses all aspects of the claimed invention as set forth in the rejection of claim 12 but fails to disclose a modem further comprising storing a list of plurality of possible domain names to query for an authorization for an ISP.

Wang discloses a modem further comprising storing a list of plurality of possible domain names to query for an authorization for an ISP. **(See Wang Column 10, Lines 14-18)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Huotari's modem to incorporate storing a list of plurality of possible domain names to query for an authorization for an ISP. The motivation being simplification and complete automation of broadband modem installation for end users interested in accessing any number of ISPs they are registered with as stated in Wang Column 10, Lines 10-15.

19. Regarding **claim 17**, Huotari discloses a modem for use in conjunction with a computer system for provisioning broadband service in a Point-to-Point Protocol Over Ethernet (PPPoE) network **(PPP is the common protocol for service provisioning circuit-switched telephone networks. It is also considered a good choice for the delivery of broadband services since it has built-in mechanisms for IP address assignment, layer-2 security, and a means for authentication/authorization/accounting. A PPPoE network is a PPP connection at an Ethernet-based host. The host is simply a PC with an Ethernet NIC and can provide access based on DSL modem that supports PPP between end users and ISPs/NSPs since ISPs/NSPs already have infrastructure to support dial-up access based on PPP. Huotari discloses an end user system shown in Figure 1 as element 105 and has a PC and a DSL modem establishing a PPPoE network. See Paragraphs 55 and 56)**, the modem comprising: instructions for causing a client

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computer to request a user identifier; and instructions for receiving the user identifier from the client computer and storing the user identifier in the modem. **(Huotari discloses that if the Dial-Up Installation Process shown in Huotari's Figure 6 is used then the user of the client computer has to supply a single identifier, which is the ISP provided username. If the Pre-Set Installation Process is used as shown in Figure 7 and the session is a PPPoE then at step 622 the user of the client computer has to supply a single identifier, which is an ISP provided PPP user name. See also Paragraphs 88, 107 and 108) and acquiring at least one static Internet Protocol (IP) address to establish connectivity to the Internet. (Huotari discloses a method where the configuration file sent from the ISP contains an IP address for the CPE/DSL Modem and the IP address can either be static or dynamic. See Huotari's Paragraphs 73, 82 and Figure 5C)**

Huotari fails to disclose storing a list of a plurality of possible domain names to query for authorization for an ISP. instructions for transmitting an authentication request including a user identifier from the modem to multiple domain names of an Internet Service Provider (ISP) over a PPPoE network; and instructions for receiving authorization for the modem from at least one but not all of the domain names of the ISP associated with the user identifier.

Wang discloses storing a list of a plurality of possible domain names to query for authorization for an ISP; **(See Wang Column 10, Lines 14-18)** instructions for transmitting an authentication request including a user identifier from the modem to multiple domain names of an Internet Service Provider (ISP) over a PPPoE network;

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and instructions for receiving authorization for the modem from at least one but not all of the domain names of the ISP associated with the user identifier. **(The broadband service is provided over a Point-to-Point over Ethernet (PPOE) network (See Figures 3, 4, 8 and 13). The DSL modem will receive the domain names of reachable service providers (See Column 9, Lines 58-67 and Column 10, Lines 44-49) in the form of a User Profile (and is stored in the modem as shown in Table 6). Wang shows that the DSL modem will let the user select a service provider and send an authentication request. The user can select more than one service providers (i.e. domain name) and fill out a username and password (as shown in Figures 6 and 14) and then can send the requests to the service providers. Wang discloses that the user can have concurrent connections to different ISPs. (See Column 10, Lines 10-24 and 56-60). There is no unique technical difficulty that the Applicant's disclosed invention overcomes in accessing different domains within an ISP as opposed to Wang's apparatus being able to access different domains associated with different ISPs. The different domains associated with the same ISP are similar to the domains associated with different ISPs and are accessed in a similar method.)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Huotari's method to incorporate a step in the DSL modem configuration and installation procedure to allow sending authentication requests to more than one domain names/ISPs, the motivation being simplification and complete

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automation of broadband modem installation for end users interested in accessing any number of ISPs they are registered with as stated in Wang Column 10, Lines 10-15.

20).

20. **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over Huotari et al (US Pub. No. 2002/0004935), hereinafter referred to as Huotari, in view of Wang et al (US 6, 636, 505), hereinafter referred to as Wang and Ramanathan et al (US 6, 182, 136), hereinafter referred to as Ramanathan.

Huotari discloses a system for provisioning broadband service in a Point-to-Point Protocol Over Ethernet (PPPoE) network, **(PPP is the common protocol for service provisioning circuit-switched telephone networks. It is also considered a good choice for the delivery of broadband services since it has built-in mechanisms for IP address assignment, layer-2 security, and a means for authentication/authorization/accounting. A PPPoE network is a PPP connection at an Ethernet-based host. The host is simply a PC with an Ethernet NIC and can provide access based on DSL modem that supports PPP between end users and ISPs/NSPs since ISPs/NSPs already have infrastructure to support dial-up access based on PPP. Huotari discloses an end user system shown in Figure 1 as element 105 and has a PC and a DSL modem establishing a PPPoE network. See Paragraphs 55 and 56) comprising: an authentication server including a table that lists user identifiers against static IP addresses (See Paragraph 58. Also Huotari discloses a method where the configuration file sent from the ISP contains an IP address for the CPE/DSL Modem and the IP address can either be static or**

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dynamic. See Huotari's Paragraphs 73, 82 and Figure 5C); at least one client computer (**Figure 1, element 105**); and a modem coupled to the client computer (**Figure 1, element 130**) the modem including a memory comprising: instructions for requesting a user identifier from the client computer; instructions for receiving the user identifier from the client computer and storing the user identifier in the modem (**See Figure 2 elements 225 and 230 and Paragraph 65. These entities can easily be part of the modem**); and possible BSNs querying their authentication server to determine whether the user identifier in the authentication request is listed in the table, if listed authorization including the static IP address from at least one of the domain names being transmitted back to the modem to establish connectivity to the Internet and instructions for receiving authorization for the modem and a static IP address from at least one but not all of the domain names of the ISP associated with said user identifier. (**See Paragraph 58. Also Huotari discloses a method where the configuration file sent from the ISP contains an IP address for the CPE/DSL Modem and the IP address can either be static or dynamic. See Huotari's Paragraphs 73, 82 and Figure 5C**);

Huotari fails to disclose a list of a plurality of possible BSN domain names to query for authorization for an ISP; instructions for transmitting an authentication request including the user identifier from the modem to the listed domain names of the ISP over a PPPoE network;

Wang discloses a list of a plurality of possible BSN domain names to query for authorization for an ISP (**See Wang Column 10, Lines 14-18**); instructions for

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transmitting an authentication request including the user identifier from the modem to the listed domain names of the ISP over a PPPoE network. **(The broadband service is provided over a Point-to-Point over Ethernet (PPOE) network (See Figures 3, 4, 8 and 13). The DSL modem will receive the domain names of reachable service providers (See Column 9, Lines 58-67 and Column 10, Lines 44-49) in the form of a User Profile (and is stored in the modem as shown in Table 6). Wang shows that the DSL modem will let the user select a service provider and send an authentication request. The user can select more than one service providers (i.e. domain name) and fill out a username and password (as shown in Figures 6 and 14) and then can send the requests to the service providers. Wang discloses that the user can have concurrent connections to different ISPs. (See Column 10, Lines 10-24 and 56-60).**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Huotari's method to incorporate a step in the DSL modem configuration and installation procedure to allow sending authentication requests to more than one domain names/ISPs, the motivation being simplification and complete automation of broadband modem installation for end users interested in accessing any number of ISPs they are registered with as stated in Wang Column 10, Lines 10-15.

Huotari fails to disclose multiple Broadband Service Nodes (BSNs) of an Internet Service Provider (ISP), each of the BSN associated with a different domain name; an authentication server coupled to each one of the multiple BSNs

Ramanathan discloses multiple Broadband Service Nodes (BSNs) of an Internet Service Provider (ISP), each of the BSN associated with a different domain name; an authentication server coupled to each one of the multiple BSNs. **(See Figure 5 with an ISP mail domain and authentication server. The same arrangement can be said for the news and web servers. See Column 6, Lines 56-64, Column 19, Lines 50-67, Column 21, Lines 63-67, Column 22, Lines 1-10, and Column 24, Lines 44-47.)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Huotari's method to incorporate an ISP with multiple BSNs, the motivation being organizing the different services provided by an ISP with front-end servers by grouping servers providing same service under the same domain name in addition to load balancing as stated in Ramanathan Column 6, Lines 56-64.

Response to Arguments

21. Applicant's arguments filed on 06 September 2005 have been fully considered but they are not persuasive.

22. Applicant, in the Remarks, Section I, on Page 7, in the first paragraph, argues that the domain names are not the high-level simple domain names associated with ISPs such as AOL or COX but internal domain names associated with ISPs. Examiner is aware of the difference but did not address it in the initial Office Action because the claims did not differentiate between external and internal domain names. However, since the amended claims indicate the distinction the rejections have been further elaborated to address this issue. Essentially, there is no added technical difficulty in accessing an internal domain name as long as the IP address and/or domain name is

known. The prior arts cited adequately show the modem being able to access the ISP via the domain name/IP. Further, Wang shows in table 6 and Figure 14 that it allows access to internal domain names.

Applicant further argues that the modem in the Applicant invention transmits authentication request to multiple domain names because neither the subscriber nor the modem is provided with a priori knowledge indicating correct domain (S) for the particular modem and user. That may be the case but is not claimed in that manner and even if claimed the cited arts adequately teach the techniques involved. The Examiner further respectfully disagrees with the Applicant's conclusion reflected in the 2nd paragraph of page 7. The domain names and user names pre-loaded in the Applicant's modem must be valid and known domain names pertinent to the subscriber and the user names at least have to be default ones. The Examiner indicates the Applicant observation on Page 7 is further qualified on Page 8, Lines 1-5 the unknown domains are really known internal domain names of an ISP and is just saving the ISP of mapping the subscriber to the appropriate internal domain name. The same functionality occurs on the network side when the subscriber is mapped from the high-level domain name to an internal domain name.

23. In the Remarks, on Page 8, in the last paragraph, Applicant argues the cited prior arts are "host driven". Examiner respectfully disagrees with Applicant's conclusion with respect to both Huotari and Wang. There is no indication that Wang's ADSL modem is host driven. The fact that the user participates in making choices of which ISP to select does not make it less "automatic" as the Applicant suggests. The Applicant suggests

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that the use of CD-ROM makes the process not automatic. There is very little user interaction installing modems with the use of CD-ROM and can definitely be considered automatic. Further Huotari has some functionalities running on the client machine but can easily be incorporated in the modem. Adding the functionalities to the modem is not crucial, as it does not affect the performance of the machine since provisioning modems are rare occurrences. Last but not least, the Examiner contends even with the Applicant's invention the user participation is required at some point in terms of knowing the username and password and being able to change it.

24. Further, Examiner would like to point out it is not clear how the Applicant can guarantee only one ISP or BSN returning an acknowledgment to the authentication request. It can only be guaranteed if the user is registered with one ISP or BSN and this simply reduces to Wang's method of downloading ISPs the user is registered with.

Conclusion

24. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following publication is cited to show the state of the art in end-user self-authentication and OSS used by ISPs to support provisioning:

US Pub. No. (2001/0019559) to Handler et al

US Patent No. (6, 667, 971) to Modarressi et al

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Habte Mered whose telephone number is 571 272 6046. The examiner can normally be reached on Monday to Friday 9:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571 272 3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HM
11-04-2005

A handwritten signature in black ink, appearing to be 'H. Kizou', written over a horizontal line.

HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600